General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution Registration Instructions

Use these instructions to complete the General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution Registration Form (DEP-AIR-REG-001). These instructions are not a substitute for the requirements of any relevant statutes or regulations. You should review all applicable laws prior to completing this registration form. Remember, it is your responsibility to comply with all applicable laws.

Introduction

The Clean Air Act (CAA), as amended in 1990, requires each state to develop a Title V operating permit program. This program applies to all major sources of air pollution and other sources subject to Federal Clean Air Act requirements such as Title 40 of the Code of Regulations (CFR) Parts 60, 61, 68, 72-78 and CAA 129(e). A Title V operating permit assembles into a single permit all state and federal air pollution control requirements applicable to each emissions unit at a given premises.

The Connecticut Department of Environmental Protection (DEP) has established the Title V operating permit program, as delineated in Section 22a-174-33 of the Regulations of Connecticut State Agencies (RCSA), to meet this federal requirement. This regulation requires the owner or operator of a Title V source to apply for and obtain a Title V operating permit.

A Title V source is:

- a premises containing any emissions unit subject to a standard or other requirement contained in 40 CFR Parts 60, 61, 62, 63, 68, 72-78 or promulgated pursuant to CAA Section 129(e), new source performance standards for solid waste combustion; and/or
- a premises, also known as a *major stationary source*, as defined in the General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution, containing one or more emissions units which emit or have the potential to emit any regulated air pollutant and/or any hazardous air pollutant (HAP) at levels above those identified in RCSA Section 22a-174-33(a)(10)(E) and (F).

DEP developed the General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution (GPLPE) to provide businesses with a streamlined mechanism for complying with Title V.

This general permit:

- is a premises wide permit;
- will be federally enforceable;
- limits total emissions from the premises to levels below applicable major stationary source levels;
- allows a source to emit up to, but not including, major stationary source levels; and,
- does not supersede or make less stringent any other environmental standard required by the commissioner.

The owner or operator of a source subject to the Title V operating permit program may seek coverage under this GPLPE *instead of obtaining a Title V operating permit*. This general permit enables Title V sources to "cap" or limit their potential and actual emissions to levels below the applicable major stationary source thresholds.

Who Can Apply?

Any owner or operator of a major stationary source seeking to limit potential and actual emissions in lieu of obtaining a Title V operating permit can seek coverage under this general permit.

Premises with actual emissions which will commence or continue to be in excess of the major stationary source threshold do not qualify for coverage under the general permit. Note: if a premises is a major stationary source, and the owner or operator of the premises decides to *remain* a major stationary source, then it will be subject to the permitting requirements of the Title V operating permit program. *In this case,* contact DEP for the Title V application package.

Also, premises whose potential and actual emissions fall *below* the major stationary source thresholds do not need to apply. If you determine that your premises's potential and actual emissions fall below the major stationary source thresholds, do not submit the *General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution Registration Form*. However, please keep records of your potential to emit calculations in order to verify your status in the future.

***Caution*:** If your premises's actual emissions are within 10 to 20 percent of the major stationary source thresholds, you should carefully consider future business needs and allow for growth and/or expansion when evaluating whether to seek coverage under the general permit.

Premises which are subject to a standard described in RCSA Section 22a-174-33(a)(10)(A) or (B), not otherwise exempted or deferred from the Title V program in accordance with RCSA Section 22a-174-33(c), will not be able to avail themselves of the general permit in lieu of the Title V permit. This, however, does not preclude a premises triggering the Title V source definition, by way of *both* a threshold and a standard described in RCSA Section 22a-174-33(a)(10)(A) or (B), from utilizing this general permit in conjunction with a deferral or an exemption from the Administrator or RCSA Section 22a-174-33. The owner or operator of a source subject to 40 CFR part 72-78 or the CAA Section 129(e), as referenced in RCSA Section 22a-174-33(a)(10)(C) and (D), is not eligible for coverage under this general permit.

If you have further questions about the Title V program or applicability to your premises, please review RCSA Section 22a-174-33, the Instructions for Completing the Permit Application for Title V Stationary Sources of Air Pollution, and the Permit Application for Title V Stationary Sources of Air Pollution. Every premises is unique and must be evaluated on a premise-wide basis prior to determining that the general permit is appropriate.

How To Apply

A completed registration form must be submitted for each premises. Your registration must include the *General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution Registration Form* (DEP-AIR-REG-001), a registration fee and all required Supporting Documents. Submit these materials together to:

CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CONNECTICUT 06106-5127

For more information contact the Bureau of Air Management, Engineering and Technical Services Division at 860-424-4152 (between 8:30 AM and 4:30 PM).

When submitting your registration, label your supporting documents as directed and always include, on each document, the registrant's name as indicated on the registration form. When additional space is necessary to answer a question stated in the registration, please insert additional sheets by the appropriate question or affix them to the relevant attachment. Label each sheet with the applicant's name, along with the corresponding section or form number and question number indicated on the registration form.

You should retain a copy of all documents for your files.

Registration Instructions (DEP-AIR-REG-001)

Please read the registration form and instructions carefully. They have been designed to obtain specific information and any information that is missing or unclear will cause delays in the review process. If any questions are not applicable to your specific activity, please enter "N/A" in the space provided. If a question or supporting document is only required for specific activities it will be noted on the registration form or in the instructions.

Please be advised that these instructions are not a substitute for any state or federal statutes or regulations. Be sure to refer to the applicable statutes and regulations while completing your registration.

Many technical terms are utilized throughout this document. For your convenience, the definitions of several key terms are provided in the Glossary at the end of these instructions. However, any question as to the meaning of a certain term should be resolved by referring to RCSA Sections 22a-174-1 and 22a-174-33. Also, check the Available Resources section, at the end of these instructions, for assistance in obtaining guidelines, maps, etc. which are referenced in these instructions.

Part I. Registration Type

Enter a check mark in the appropriate box to specify if the registration is a new registration or a re-registration. For a re-registration, list the existing approval of registration number and date approved.

Part II. Fee Information

A fee of $5000.00 must be submitted for the approval of registration you are seeking. The registration will not be processed without the fee. The payment should be in the form of a check or money order made payable to the **Department of Environmental Protection** or by such other method as the commissioner may allow. For municipalities, the 50% discount applies.

Part III. Registrant Information

When completing this part, please use the following standards:

- *Name* - Provide the full, legal *company/firm* name. If an entity is registered with the Secretary of the State, fill in the exact name as shown on the registration. If the entity is an *individual*, provide the full legal name in the following format: Title (Ms, Dr, etc.); First Name; Middle Initial; Last Name; Suffix (Jr., PE, Ph.D., etc.).

- *Phone* - Unless otherwise indicated, the phone number provided should be the number where the individual can be contacted during daytime business hours.

- *E-Mail Address* - Unless otherwise indicated, the e-mail address provided should be the address where the individual can be contacted during daytime business hours.

- *Contact Person* - Provide the name of the specific individual within the company whom DEP may contact.

1. *Registrant* - Fill in the full, legal name of the owner or operator of the premises as it appears

on the Permit Application Transmittal Form (DEP-APP-001). If there are co-registrants, enter a check mark in the appropriate box and attach separate sheets providing the required information.

2. *Premises Owner* - Please list the owner of the premises *if different than the registrant*.

3. *Primary Contact* - If you have authorized a consultant, engineer, attorney or other agent to act for you during the processing of the registration, complete this section. DEP will direct copies of all correspondence and inquiries to the primary contact.

4. *Engineers or Consultants* - List any engineers or other consultants employed or retained to assist in preparing the registration. Also indicate the type of service or assistance provided. (Note: You are not required to employ or retain an engineer or consultant to prepare this registration.)

5. *Attorney* - It is not required that a registrant be represented by an attorney or any other agent. If you do have an attorney, complete this section.

Part IV: Premises Information

1. *Premises Name and Address:* The premises name should be the name by which the premises is commonly known and/or uniquely identified.

   The information given as the premises address should be the address of the property at which the proposed activity will take place. Include the street address and municipality. If the property does not have a street number, describe the location in terms of the distance and direction from an obvious landmark such as an intersection with another roadway, a bridge, or a river. For example, "...on River Street, approximately 1000 feet north of its intersection with Bear Swamp Road."

2. *SIC (Standard Industrial Classification) Code:* List the primary SIC code applicable to the premises or type of business conducted by the registrant. If a premises has more than one SIC code, provide the code which identifies the type of activity in which the premises engages at least 50% of the time.

   SIC codes can be determined from the *Standard Industrial Classification Manual* produced by the Executive Office of the President, Office of Management and Budget and sold by the National Technical Information Service. A copy of this book is available at most local public libraries.

3. *Latitude and Longitude:* Provide the latitude and longitude, in degrees, minutes and seconds, of the approximate center of the premises. Indicate the quadrangle name and provide a copy of the USGS Map as Attachment A.

4. *Indian Lands:* Enter a check mark in the appropriate box to specify if the premises is located on federally recognized Indian lands.

5a. *VOC RACT:* Indicate if the premises is subject to RCSA Section 22a-174-32, Reasonably Available Control Technology for Volatile Organic Compounds. If yes, complete Part IX of the registration form.

5b. Indicate if the subject owner or operator has submitted a VOC RACT Plan pursuant to RCSA Section 22a-174-32(d). If no, the registrant should submit such plan with the registration form as Attachment D. If yes, indicate submittal date.

6. *40 CFR Part 60:* Indicate if any emissions units on the premises are subject to any New Source Performance Standard (40 CFR Part 60). If so, indicate the emissions unit and the respective

subpart.

7. *40 CFR Part 63:* Indicate if any emissions units on the premises are subject to any Maximum Achievable Control Technology standard (40 CFR Part 63). If so, indicate the emissions unit and the respective subpart.

Useful Resources for Preparing Your Emissions Unit Inventory

If you have had contact with the Air Bureau before, you may have received emission statements or pre-inspection questionnaire (PIQ) forms from the bureau. These documents provide an excellent starting point for preparing an emissions unit inventory. Even if you have these documents, it still is important to conduct a premises tour to make sure you inventory *all* the air emissions units at your premises, including those that do not appear on your emission statement or PIQ forms. (Examples of emissions units are: emergency generators, boilers, degreasers, spray booths, etc.).

It will also be useful to gather any air permits, registrations, or administrative orders that you have at this time. These documents are also helpful in preparing an emissions unit inventory.

Note: If you have R&D facilities, emissions units in the R&D facility must be included in the emissions unit inventory for your premises.

Part V: Emissions Unit Inventory

This section applies only to a premises that is not currently registered under the GPLPE issued March 29, 2001. If the registrant is currently registered under the GPLPE issued March 29, 2001, go to Part VI.

1. *Emissions Unit (EU) Information:*

   a. *EU No.:* Create an emissions unit number for each emissions unit on the premises. The emissions unit will be used as a simple method to reference each emissions unit, without having to provide the make, model, and serial number of the emissions unit each time. Begin this identifying number with the letters "EU" (e.g. EU-001, EU-002,...EU-999). For example, two identical Cleaver Brooks boilers could be represented as EU-001 and EU-002.

   b. *Description:* List the description of each emissions unit such as the make, model, or serial number.

   c. *Permit, Registration, Approval of Registration or Regulatory Section Number:* List the permit, registration, approval of registration or regulatory section number associated with each emissions unit, if applicable. If an emissions unit is not currently operating under a permit, registration, approval of registration, or regulatory section, list "N/A".

2. *Grouped Emissions Unit (GEU) Information:*

   a. *GEU No.*: Create an emissions group number for each emissions group formed. All emissions group numbers shall begin with the letters "GEU" followed by a sequential numbering system (e.g. GEU-001, GEU-002,...GEU-999). As an example, the identical Cleaver Brooks boilers mentioned above could be given an emissions group number. "GEU-001" would be entered, then "EU-001" and "EU-002" would be listed.

   b. *EUs:* List the emissions unit numbers of any group of emissions units which share the same SCC code that are to be considered one group. Combining similar or identical emissions units into groups will make it easier to calculate the air emissions for the premises. Emissions units that do not have the same SCC numbers or do not have the same emission factors associated with them cannot be combined into an emissions group.

Part VI: Re-registering Premises

This section applies only to a premises that is currently registered under the GPLPE issued March 29, 2001.

1. *Premises Activities:* Indicate which activities, if any, that have taken place at the premises since the approval of registration, listed in Part I above, was granted for such premises. (Check all that apply)

   A change is defined as any:

   a. physical change to an emissions unit;

   b. change in the method of operation of an emissions unit; or

   c. change in the method of calculating emissions that resulted in an increase or decrease in potential or actual emissions from such emissions unit.

2. *Emissions Units Inventory*: Before completing this section, review tables a-d to ensure that each emissions unit on the premises is listed on the correct table. Each EU may only be listed once, unless it is part of a GEU.

   a. *Previously Approved Emissions Units Information:*

      i. *EU No.*: List the emissions unit number for each emissions unit previously approved in the registration under the GPLPE issued March 29, 2001, unless such unit has been removed. For each EU on this table, please use the same EU No. previously assigned to each EU.

      ii. *Description:* List a description of each emissions unit such as the make, model or serial number.

      iii. *Changes:* Indicate if each emissions unit has had any change to it, as defined above, since it was approved for registration under the GPLPE issued March 29, 2001. Use the following letters to indicate which change was made: P - physical change, O - change in the method of operation, C - change in method of emissions calculation, N - no change.

   b. *New Emissions Units Information:*

      i. *EU No.*: Create a new emissions unit number for each emissions unit that was not included in the original approval of registration.

      ii. *Description:* List the description of each emissions unit, such as the make, model or serial number.

      iii. *Permit, Approval of Registration or Regulatory Section No.*: List the permit, approval of registration or regulatory section number associated with each emissions unit, if applicable. If an emissions unit is not currently operating under a permit, approval of registration, or regulatory section, list "N/A".

   c. *Emissions Units Removed Information*:

      i. *EU No.*: List the emissions unit number for each emissions unit which was previously approved in the registration under the GPLPE issued March 29, 2001and is no longer at the premises. For each EU on this table, please use the same EU No. previously assigned to each EU.

      ii. *Description:* List a description of each emissions unit such as the make, model or serial number.

iii. *Permit,Registration, Approval of Registration or Regulatory Section No.:* List the permit, registration, approval of registration or regulatory section number associated with each EU, if applicable. If an emissions unit was not operating under a permit, registration, approval of registration , or regulatory section, list "N/A".

d. *Grouped Emissions Units Information:*

i. *GEU No.*: List an emissions unit group number for each emissions group formed. All emissions unit group numbers shall begin with the letters "GEU" followed by a sequential numbering system (e.g. GEU-001, GEU-001,...GEU-999). If listing a previously approved group, please use the same previously assigned GEU No.

ii. *EUs:* List the emissions unit numbers of any group of emissions units which share the same SCC code that are to be considered one group. Combining similar or identical emissions units into groups will make it easier to calculate the air emissions for the premises. Emissions units that do not have the same SCC numbers or do not have the same emission factors associated with them cannot be combined into an emissions group.

Part VII: Premises Emissions Summary for PM-2.5, PM-10, SOx, NOx, VOC, CO, and Lead

Parts VII and VIII serve as premises emissions summaries. Before completing these sections you must calculate, by emissions unit or grouped emissions unit, your potential and actual emissions.

1. *Premises Name*: List the premises name.

2. *Ozone Non-Attainment Status:* Identify the ozone non-attainment status of the area in which the premises is located as either serious or severe non-attainment. Major stationary source threshold levels depend on this status.

Every town in the state is classified as a *serious* ozone non-attainment area except for the following towns, which are classified as *severe* ozone non-attainment areas:

Bethel	New Milford
Bridgeport	Newtown
Bridgewater	Norwalk
Brookfield	Redding
Danbury	Ridgefield
Darien	Sherman
Easton	Stamford
Fairfield	Stratford
Greenwich	Trumbull
Monroe	Weston
New Canaan	Westport
New Fairfield	Wilton

3. *Major Stationary Source Classification:* Specify the pollutant(s) (PM-2.5, PM-10, SOx, NOx, VOC, CO, and Lead) for which the premises is classified as a major stationary source.

A premises is classified as a major stationary source if the potential emissions from such premises exceed the following thresholds:

- one hundred (100) tons per year (TPY) of any individual air pollutant;
- fifty (50) TPY of VOC or NOx in a serious non-attainment area for ozone; or
- twenty-five (25) TPY of VOC or NOx in a severe non-attainment area for ozone.

4. *Emissions Unit Number*: List the emissions unit number for each emissions unit at the premises which emits PM-2.5, PM-10, SOx, NOx, VOC, CO, and Lead. This number

should be the same emissions unit number or emissions group number you assigned to the equipment in Part V or Part VI.

Duplicate this form as necessary to list every emissions unit in your premises. If you do need more than one page, please enter the page number and total pages at the top of each sheet (page x of y).

5-11. *Potential and Actual Emissions:* For each emissions unit, list the potential and actual emissions of PM-2.5, PM-10, SOx, NOx, VOC, CO, and Lead during the twelve(12) months immediately preceding the date of registration or during such other time period designated by the commissioner. Refer to Section 5(b) of the GPLPE for determining the source of data for calculating such emissions. These values should be expressed in tons per year (TPY). *Copies of the calculations used in obtaining the potential and actual emissions must be submitted as Attachment B, as applicable.*

12. *Totals (TPY) (This Page)*: For each pollutant, add the amounts of potential emissions you have listed on this sheet, and then add the actual emissions. (This will give you the subtotal of potential and actual emissions for each pollutant for the emissions units listed on this page.)

13. *Premises Totals:* Enter the premises totals for potential and actual emissions for each of the pollutants. If you have used more than one sheet to accommodate all of your emissions units, add the subtotals from each sheet and enter the *premises total*s in the spaces provided on the *first* of your multiple pages.

Part VIII: Premises Emissions Summary for Hazardous Air Pollutants (HAPs)

Parts VII and VIII serve as premises emissions summaries. Before completing these sections you must calculate, by emissions unit, your potential and actual emissions.

1. *Premises Name:* List the premises name.

2. *Listed Hazardous Air Pollutants:* Indicate (Yes or No) whether you use or emit any of the 187 Hazardous Air Pollutants (HAP) listed in Appendix C in the instructions.

   If your response is No, continue on to Part IX.

   If your response is Yes, indicate whether or not you are a major stationary source for any single HAP or combination of HAPs. A major stationary source for HAPs is any premises which emits or has the potential to emit ten (10) TPY or more of any single HAP, which has been listed pursuant to Section 112(b) of the CAA, except hydrogen sulfide, or twenty five (25) TPY or more of any combination of HAPs.

3. *Emissions Unit Number:* List the emissions unit number for each emissions unit at the premises which emits HAPs. This number should be the same emissions unit number or emissions group number you assigned to the equipment in Part V or Part VI.

   Duplicate this form as necessary to list every emissions unit in your premises that emits HAPs. If you do need more than one page, please enter the page number and total pages at the top of each sheet (page x of y).

4. *HAP Name:* Enter the name of each Hazardous Air Pollutant which you use or emit in the space(s) provided. (Appendix C lists the 187 hazardous air pollutants subject to the provisions of Section 112 of the 1990 Clean Air Act Amendments.)

5. *CAS Number:* Enter the Chemical Abstracts Service (CAS) Number for each HAP you use or emit. (This number is included in the HAP list

in Appendix C.)

Potential and Actual Emissions: For each emissions unit, list the potential and actual emissions of each HAP you have listed during the twelve(12) months immediately preceding the date of registration or during such other time period designated by the commissioner. Refer to Section 5(b) of the GPLPE for determining the source of data for calculating such emissions. These values should be expressed in tons per year (TPY). *Copies of the calculations used in obtaining the potential and actual emissions must be submitted as Attachment B, as applicable.*

6. *Totals (TPY) (This page):* For each HAP you have listed, add the amounts of potential, and then add the actual emissions. (This will give you the subtotal of potential and actual emissions for each HAP for the emissions units listed on this page.)

7. *Premises Totals (TPY) (Each HAP):* Enter the premises totals for potential and actual emissions for each of the HAPs. If you have used more than one sheet to accommodate all of your emissions units, add the subtotals from each sheet and enter the *premises total*s in the spaces provided on the *first* of your multiple pages.

8. *Premises Total All HAPs*: Add together *all* of your potential HAPs emissions, then add together *all* of your actual HAPs emissions. These calculations are necessary to determine whether you are a major stationary source for a combination of HAPs.

Part IX: Documentation of Actual VOC Emissions

If the premises is subject to RCSA Section 22a-174-32, Reasonably Available Control Technology (RACT) for VOCs, the owner or operator is required to complete this part by documenting the actual emissions of VOC from the premises for each calendar year, or portion thereof, after December 31, 1995, do not exceed the levels specified in Section 3(a)(3) of the GPLPE.

Part X: Supporting Documents

All registration forms submitted to DEP must include Attachments A through D, as applicable. Place a check mark in the appropriate box by each applicable attachment as verification that all applicable attachments have been submitted.

Please label all attachments as referenced in the registration form and these instructions and be sure to include the name of the registrant.

Attachment A: United States Geological Survey (USGS) Topographic Quadrangle Map

Submit, as Attachment A, an 8 1/2" x 11" copy of the relevant portion of a United States Geological Survey (USGS) Quadrangle Map, at a scale of 1:24,000, indicating the location of the approximate center of the premises. The quadrangle name should also be noted on the copy of the map submitted. See Figure A, on the next page, for an example of how a USGS map must be labeled when submitted.

DEP will use this map to enter your premises location into its Geographic Information System (GIS). It is important that you accurately locate the premises because the GIS generates natural resource information relevant to your site. An inaccurate description of the project location may delay processing of your registration.

Attachment B: Emissions Calculations

Submit, as Attachment B, one copy of the calculations used to determine emissions.

If the premises is not currently registered under the GPLPE issued March 29, 2001, emissions calculations must be submitted for all EUs/GEUs.

If the premises is currently registered under the

GPLPE issued March 29, 2001, emissions calculations must be submitted for only those emissions units that are new or changed.

Attachment C: Applicant Compliance Information Form (DEP-APP-002)

CGS Section 22a-6m provides for DEP review of an applicant's record of compliance with the environmental laws of Connecticut, any other state and the federal government. Under the law, DEP may consider the applicant's environmental compliance record, as well as the record of the applicant's principals and any parent companies or subsidiaries, when reviewing a permit application. All permit applications must include a completed *Applicant Compliance Information Form* (DEP-APP-002) as Attachment C.

Attachment D: VOC RACT Compliance Plan

If the premises is subject to RCSA Section 22a-174-32, RACT for VOCs, the owner or operator is required to submit a compliance plan in accordance with RCSA Section 22a-174-32(d). If such plan has not been previously submitted, submit, as Attachment D, such compliance plan.

Part XI: Certification

After the application has been completed it must be reviewed and signed in accordance with the provisions of RCSA Section 22a-174-2a(a). An application will be considered insufficient unless all required signatures are provided.

RCSA Section 22a-174-2a requires that any New Source Review or Title V document, including but not limited to, a permit application, report or certification, submitted to the commissioner shall be signed by certain named individuals or positions, as identified in RCSA Section 22a-174-2a(a).

Only Title V corporations identified in RCSA Section 174-2a(a)(2)(B) must complete and submit the *Written Authorization Form* (DEP-AIR-SIG-REG-002) in order to comply with this requirement.

This form is to be used to designate the individual(s) who or position(s) which are authorized to submit Title V documents to the commissioner. This form must be submitted and approved ***prior*** to submitting any Title V documents as required by RCSA Section 22a-174-33. Please refer to the instructions (DEP-AIR-SIG-INST-002) in addition to RCSA Section 22a-174-2a(a) to complete this form.

Written authorization of a named individual or position is not approved until done so in writing by the commissioner or the commissioner's designee.

The form and instructions are available on our website:
http://www.dep.state.ct.us/pao/download.htm#Air
or you may call the Bureau of Air Management, Office of the Bureau Chief at 860-424-3026 with questions.

You need to submit a *Written Authorization Form* for initial approval and any time thereafter if a different individual or position is assigned or has assumed the signatory responsibilities.

Available Resources

Below is a list of possible resources, reference documents and guidelines which may be used in preparing your registration. Please call the appropriate office in advance for hours of operation.

CTDEP
http://dep.state.ct.us

- application forms
- instructions for application forms

Engineering and Technical Services 860-424-4152
Planning and Standards 860-424-3027
Office of Pollution Prevention 860-424-3297
DEP Maps and Publications 860-424-3555
DEP File Room 860-424-4180

EPA
http://www.epa.gov/ttn

- CHIEF - Emission Factors (AP-42, FIRE, TANKS, etc.)
- AIRS - AIRS Guidance Information
- UATW - Air Toxics Information
- EPA Guidance Documents

USGS Maps
http://mapping.usgs.gov

Code of Federal Regulations (CFR)
http://www.access.gpo.gov/nara/cfr

- On-line access to 40 CFR Part 60
- On-line access to 40 CFR Part 63

Standard Industrial Classification (SIC) Codes
http://www.osha.gov/oshstats/sicser.html

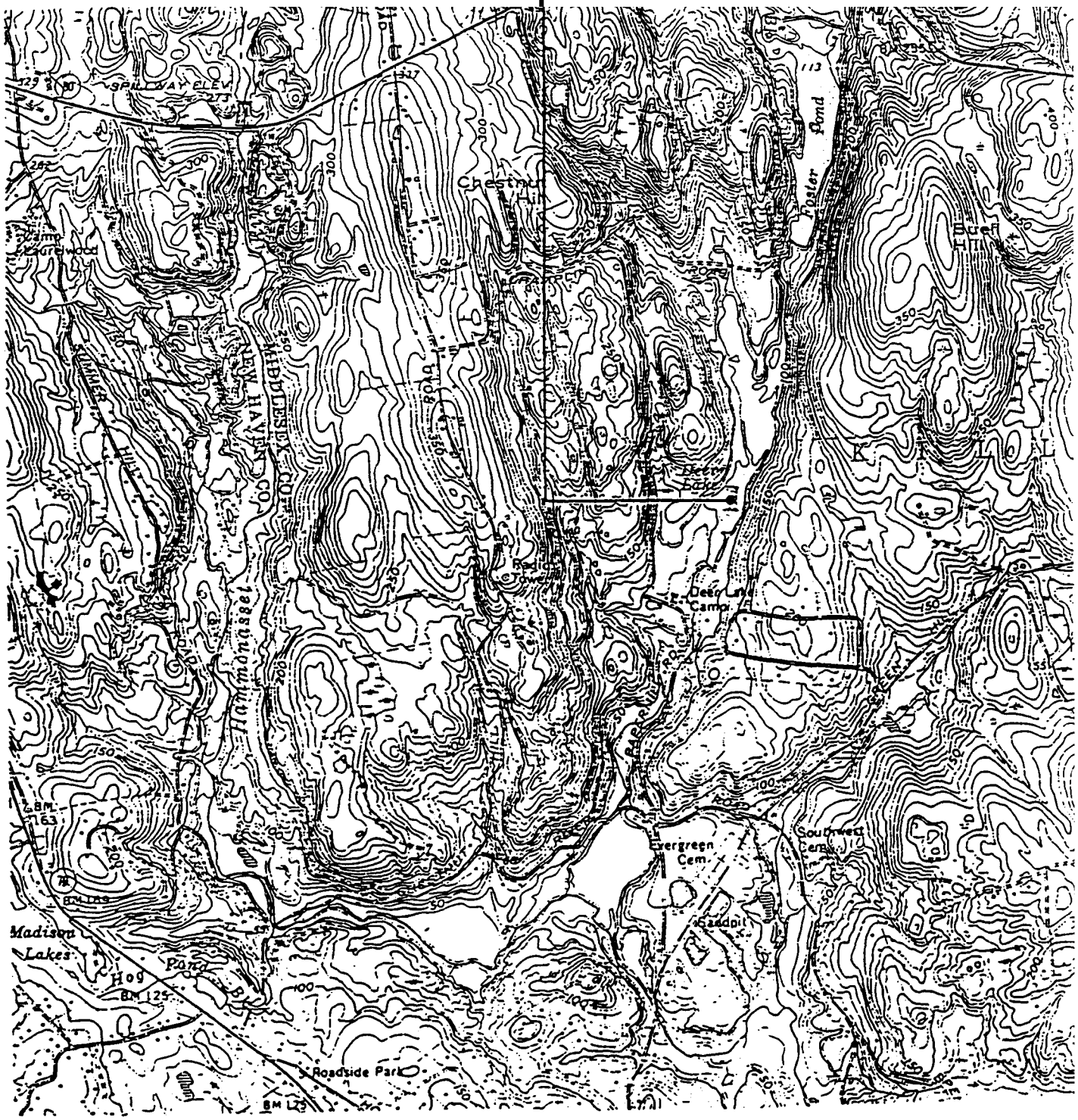
Local Library

- Air Pollution Engineering Manual: Air & Waste Management Association
- Chemical Engineer's Handbook: Perry & Chilton
- USGS Maps

Figure A: General Permit to Limit Potential to Emit from Major Stationary Sources of Air Pollution Example

USGS Quadrangle Map: Clinton
Map Scale: 1:24,000 (I"= 2,000')

Approximate Center of Facility



Appendix A: Glossary

Actual Emissions: means the rate of emissions from a stationary source, including fugitive emissions quantified by permit, order or by registration information, after application of air pollution control equipment, of a particular air pollutant where the rate of emissions is calculated using:

a. real or expected production rates, hours of operation, and types of materials processed, stored or combusted for the period specified; and

b. information from the "Compilation of Air Pollutant Emission Factors" (AP-42, 5th edition) published by EPA, relevant emissions unit test data or other information deemed more representative by the commissioner.

See definition Title 40 of the Code of Federal Regulations Part 51.165(a)(1)(xii)(A) to (B), inclusive.

Allowable Emissions: means the rate of emissions from a stationary source of a particular air pollutant where the emission rate is calculated using the maximum rated capacity of the source, unless the source is subject to permit conditions or other order of the commissioner which limit the maximum rated capacity by restricting the operating rate or hours of operation of the source, and the most stringent of the following:

a. applicable standards as set forth in Title 40 of the Code of Federal Regulations Part 60 and Part 61, as from time to time may be amended;

b. the applicable emission limitation under these regulations including those with a future compliance date;

c. the emission rate specified as a condition of a permit or order issued by the commissioner, including any such condition with a future compliance date; or

d. the applicable emission limitation under the State Implementation Plan, including any such limitation with a future compliance date.

See definition Title 40 of the Code of Federal Regulations Part 51.165(a)(1)(xi).

Criteria Air Pollutant: means any air pollutant for which an ambient air quality standard has been established by the administrator in accordance with CAA Section 107.

Emission Factor: a representative value that relates the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance, or duration of the activity emitting the pollutant. For example, pounds of pollutant emitted per hour (lbs/hour); pounds of pollutant emitted per pounds of product produced (lbs/lbs product); tons of pollutant per year (TPY); pounds of pollutants per 10^6 x British Thermal Unit of heat input (lbs/MMBTU); and tons of SO_2 produced per gallons of fuel oil used (tons SO2/gal fuel oil). Such factors facilitate estimation of emission rates of air pollution from various emissions units.

Methods to determine the emission factors shall be used in the following decreasing order of priority:

a. Continuous Emission Monitoring (CEM);

b. stack test;

c. manufacturer’s data;

d. material balance; and

e. AP-42, fifth edition (EPA)

Emissions Unit: means any part or activity of a stationary source which part or activity emits or has the potential to emit any regulated air pollutant or any hazardous air pollutant (HAP).

See definition Title 40 of the Code of Federal Regulations Part 51.165(a)(1)(vii).

Hazardous Air Pollutant or HAP: means any pollutant listed pursuant to Section 112 (b) of the Clean Air Act.

Major Stationary Source: means:

a. any one or more stationary sources, which are located on one or more contiguous or adjacent properties under common control of the same person or persons and which emit, or have the potential to emit, including fugitive emissions to the extent quantifiable, in the aggregate, ten (10) tons or more per year of any hazardous air pollutant, twenty-five (25) tons or more per year of any combination of hazardous air pollutants, or the quantity established by the Administrator pursuant to 40 CFR Part 63; or

b. any one or more stationary sources, which are located on one or more contiguous or adjacent properties under common control of the same person or persons and which possess the same two-digit Standard Industrial Classification Code, as published by the United States Office of Management and Budget in the Standard Industrial Classification Manual of 1987, and which emit, or have the potential to emit, including fugitive emissions from those categories of sources listed in (2)(i) through (xxvii) in the definition of "major source" in 40 CFR Part 70.2:

    1. one hundred (100) tons or more per year of any regulated air pollutant;

    2. fifty (50) tons or more per year of volatile organic compounds or nitrogen oxides in a serious ozone nonattainment area; or

    3. twenty-five (25) tons or more per year of volatile organic compounds or nitrogen oxides in a severe ozone nonattainment area.

See definition Title 40 of the Code of Federal Regulations Part 51.165(a)(1)(iv).

Maximum Rated Capacity: means the design maximum hourly capacity or highest demonstrated hourly capacity, whichever is greater, multiplied by 365 days per year and 24 hours per day.

Nitrogen Oxides or NOx: means the sum of all oxides of nitrogen, expressed as nitrogen dioxide.

PM-2.5: means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by a reference method based on Appendix L of Title 40 Code of Federal Regulations Part 50 and designated in accordance with Title 40 Code of Federal Regulations Part 53 or by an equivalent method.

PM-10: means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on Appendix M of Title 40 Code of Federal Regulations Part 50 and designated in accordance with Title 40 Code of Federal Regulations Part 53 or by an equivalent method approved by the Administrator in accordance with Title 40 Code of Federal Regulations Part 53.

Potential Emissions or Potential to Emit: means the rate of emissions from a stationary source, including fugitive emissions to the extent quantified by permit, order or by registration information, after application of air pollution control equipment, of a particular air pollutant such that the rate is equal to or greater than the actual emissions and where the rate of emissions is calculated using:

a. The maximum rated capacity of the stationary source, unless the maximum rated capacity is limited by restrictions on production rates, hours of operation, and types of materials processed, stored or combusted either through permit conditions or other order of the commissioner; and

b. Information from the "Compilation of Air Pollutant Emission Factors" (AP-42, 5th edition) published by the U. S. Environmental Protection Agency, relevant emissions unit test data or other information deemed more representative by the commissioner.

SCC: means the Source Classification Code devised by the EPA to categorize emission factors for emissions units identified in “AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants”, EPA-450/4-90-003, EPA, RTP, NC, March 1991.

SIC: means the Standard Industrial Classification code devised by the United States Office of Management and Budget identified in "The Standard Industrial Classification of Establishments (1987 edition)", to classify establishments according to the type of economic activity in which they are engaged.

Stationary Source: means any building, structure, facility, equipment, operation, or installation which is located on one or more contiguous or adjacent properties and which is owned by or operated by the same person, or by persons under common control, which emits or may emit any air pollutant, and which does not move from location to location during normal operation except that portable rock crushers and portable stripping facilities which are moved from site to site but remain stationary during operation and asphalt plants which combine aggregate and asphalt while in motion are stationary sources.

Volatile Organic Compound or VOC: means any compound of carbon which participates in atmospheric photochemical reactions excluding those compounds listed in the definition of Volatile Organic Compound found in Section 22a-174-1 of the Regulations of Connecticut State Agencies. Consult Engineering and Technical Services Division at 860-424-4152 for further information on the use of any of these chemicals.

See definition Title 40 of the Code of Federal Regulations Part 51.100(J).

Appendix B: Control Equipment Identification Codes

000	No Equipment
001	Wet Scrubber - Efficiency 95-99+%
002	Wet Scrubber - Efficiency 80-95%
003	Wet Scrubber - Efficiency < 80%
004	Gravity Collector -Efficiency 95-99+%
005	Gravity Collector - Efficiency 80-95%
006	Gravity Collector - Efficiency < 80%
007	Centrifugal Collector - Efficiency 95-99+%
008	Centrifugal Collector - Efficiency 80-95%
009	Centrifugal Collector - Efficiency < 80%
010	Electrostatic Precipitator - Efficiency 95-99+%
011	Electrostatic Precipitator - Efficiency 80-95%
012	Electrostatic Precipitator - Efficiency < 80%
013	Gas Scrubber, General
014	Mist Eliminator - Velocity > 250 ft/min
015	Mist Eliminator - Velocity < 250 ft/min
016	Fabric Filter - Temperature > 250 F
017	Fabric Filter - Temperature 180 F to 250 F
018	Fabric Filter - Temperature < 180 F
019	Catalytic Afterburner
020	Catalytic Afterburner with Heat Exchanger
021	Direct Flame Afterburner
022	Direct Flame Afterburner with Heat Exchanger
023	Flaring
024	Modified Furnace or Boiler Design
025	Staged Combustion
026	Flue Gas Recirculation
027	Reduced Combustion Air Preheating
028	Steam or Water Injection
029	Low Excess Air Firing
030	Use of Fuel with Low Nitrogen Content
031	Air Injection
032	Ammonia Injection
033	Control of the % of Oxygen in Combustion Air
034	Wellman-Lord Sodium Sulfite Scrubbing
035	Magnesium Oxide Scrubbing
036	Dual Alkali Scrubbing
037	Citrate Process Scrubbing
038	Ammonia Scrubbing
039	Catalytic Oxidation - Flue Gas Desulf
040	Alkalized Alumina
041	Dry Limestone Injection
042	Wet Limestone Injection
043	Sulfuric Acid Plant - Contact Process
044	Sulfuric Acid Plant - Double Contact Process
045	Sulfur Plant
046	Process Change
047	Vapor Recovery System
048	Activated Carbon Adsorption
049	Liquid Filtration System
050	Packed-Gas Adsorption Column
051	Tray-type Gas Adsorption Column
052	Spray Tower
053	Venturi Scrubber
054	Process Enclosed
055	Impingement Plate Scrubber
056	Dry Dynamic Separator
057	Wet Dynamic Separator
058	Mat or Panel Filter
059	Metal Fabric Filter Screen
060	Process Gas Recovery
061	Dust Suppression by Water Sprays
062	Dust Suppression by Chemicals
063	Gravel Bed Filter
064	Annular Ring Filter
065	Catalytic Reduction
066	Molecular Sieve
067	Wet Lime Slurry Scrubbing

068 Alkaline Fly Ash Scrubbing

069 Sodium Carbonate Scrubbing

070 Sodium Alkali Scrubbing

071 Fluid Bed Dry Scrubber

072 Tube and Shell Condenser

073 Refrigerated Condenser

074 Barometric Condenser

075 Single Cyclone

076 Multiple Cyclone Without Fly Ash Reinjection

077 Multiple Cyclone With Fly Ash Reinjection

078 Baffle

079 Dry Electrostatic Granular Filter

080 Chemical Oxidation

081 Chemical Reduction

082 Ozonation

083 Chemical Neutralization

084 Activated Clay Adsorption

085 Wet Cyclonic Separator

086 Water Curtain

087 Nitrogen Blanket

088 Conservation Vent

089 Bottom Filling

090 Conversion to Variable Vapor Space Tank

091 Conversion to Floating Roof Tank

092 Conversion to Pressurized Tank

093 Submerged Filling

094 Underground Tank

095 White Paint

096 Vapor Lock Balance Recovery System

097 Secondary Seal for External Floating Roof Tank

098 Moving Bed Dry Scrubber

099 Miscellaneous Control Device

101 High Efficiency Particulate Air Filter

Appendix C. List of 187 Hazardous Air Pollutants Subject to the Provisions of Section 112 of the 1990 Clean Air Act Amendments

Chemical Name	Chemical Abstracts Service Number (CAS#)
1. Acetaldehye	75-07-0
2. Acetamide	60-35-5
3. Acetonitrile	75-05-8
4. Acetophenone	98-86-2
5. 2-Acetylaminofluorene	53-96-3
6. Acrolein	107-02-8
7. Acrylamide	79-06-1
8. Acrylic acid	79-10-7
9. Acrylonitrile	107-13-1
10. Allyl chloride	107-05-1
11. 4-Aminobiphynyl	92-67-1
12. Aniline	62-53-3
13. o-Anisidine	90-04-0
14. Antimony Compounds	---------
15. Arsenic Compounds (inorganic including arsine)	--------
16. Asbestos	1332-21-4
17. Benzene	71-43-2

Chemical Name	Chemical Abstracts Service Number (CAS#)
18. Benzidine	92-87-5
19. Benzotrichloride	98-07-7
20. Benzyl chloride	100-44-7
21. Beryllium Compounds	--------
22. Biphenyl	92-52-4
23. Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7
24. Bis(chloromethyl) ether	542-88-1
25. Bromoform	75-25-2
26. 1,3-Butadiene	106-99-0
27. Cadmium Compounds	--------
28. Calcium Cyanamide	156-62-7
29. Captan	133-06-2
30. Carbaryl	63-25-2
31. Carbon disulfide	75-15-0
32. Carbon tetrachloride	56-23-5
33. Carbonyl sulfide	463-58-1
34. Catechol	120-80-9

Chemical Name	Chemical Abstracts Service Number (CAS#)
35. Chloramben	133-90-4
36. Chlordane	57-74-9
37. Chlorine	7782-50-5
38. Chloroacetic acid	79-11-8
39. 2-Chloroacetophenone	532-27-4
40. Chlorobenzene	108-90-7
41. Chlorobenzilate	510-15-6
42. Chloroform	67-66-3
43. Chloromethyl methyl ether	107-30-2
44. Chloroprene	126-99-8
45. Chromium Compounds	--------
46. Cobalt Compounds	--------
47. Coke Oven Emissions	--------
48. Cresol/Cresylic acid (mixed isomer)	1319-77-3
49. m-Cresol	108-39-4
50. 0-Cresol	95-48-7
51. p-Cresol	106-44-5
52. Cumene	98-82-8
53. Cyanide Compounds[1]	--------
54. 2,4-D(2,4-Dichlorophenoxyacetic Acid)(including salt and esters)	94-75-7

Chemical Name	Chemical Abstracts Service Number (CAS#)
55. 1,1-dichloro-2,2-bis(p-chlorophenyl) ethylene (DDE)	354-70-44
56. Diazomethane	334-88-3
57. Dibenzofuran	132-64-9
58. 1,2-Dibromo-3-chloropropane	96-12-8
59. Dibutyl phthalate	84-74-2
60. 1,4-Dichlorobenzene	106-46-7
61. 3,3'-Dichlorobenzidine	91-94-1
62. Dichloroethyl ether (Bis[2-chloroethyl]ether)	111-44-4
63. 1,3-Dichloropropene	524-75-6
64. Dichlorvos	62-73-7
65. Diethanolamine	111-42-2
66. N,N-Dimethylaniline(Diethyl aniline (N,N))	121-69-7
67. Diethyl sulfate	64-67-5
68. 3,3'-Dimethoxybenzidine	119-90-4
69. Dimethyl aminoazobenzene	60-11-7
70. 3,3'-Dimethyl benzidine	119-93-4
71. Dimethyl carbamoyl chloride	79-44-7
72. Dimethyl formamide	68-12-2
73. 1,1 Dimethyl hydrazine	57-14-7
74. Dimethyl Phthalate	131-11-3

Chemical Name	Chemical Abstracts Service Number (CAS#)
75. Dimethyl sulfate	77-78-1
76. 4,6-Dinitro-o-cresol (including salts)	534-52-1
77. 2,4-Dinitrophenol	51-28-5
78. 2,4-Dinitrotoluene	121-14-2
79. 1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1
80. 1,2-Diphenylhydrazine	122-66-7
81. Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8
82. 1,2-Epoxybutane	106-88-7
83. Ethyl acrylate	140-88-5
84. Ethylbenzene	100-41-4
85. Ethyl carbamate (Urethane)	51-79-6
86. Ethyl chloride (Chloroethane)	75-00-3
87. Ethylene dibromide (Dibromoethane)	106-93-4
88. Ethylene Dichloroide (1,2-Dichloroethane)	107-06-2
89. Ethylene glycol	107-21-1
90. Ethyleneimine (Aziridine)	151-56-4
91. Ethylene oxide	75-21-8
92. Ethylene thiourea	96-45-7
93. Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
94. Formaldehyde	50-00-0

Chemical Name	Chemical Abstracts Service Number (CAS#)
95. Glycol ethers[2]	--------
96. Heptachlor	76-44-8
97. Hexachlorobenzene	118-74-1
98. Hexachlorobutadiene	87-68-3
99. Hexachlorocyclopentadiene	77-47-4
100. Hexachloroethane	67-72-1
101. Hexamethylene diisocyanate	822-06-0
102. Hexamethylphosphoramide	680-31-9
103. Hexane	110-54-3
104. Hydrazine	302-01-2
105. Hydrochloric acid (Hydrogen chloride [gas only])	7647-01-0
106. Hydrogen fluoride (Hydrofluoric acid)	7664-39-3
107. Hydroquinone	123-31-9
108. Isophorone	78-59-1
109. Lead Compounds	--------
110. Lindane (all isomer)	58-89-9
111. Maleic anhydride	108-31-6
112. Manganese Compounds	--------
113. Mercury Compounds	--------
114. Methanol	67-56-1

Chemical Name	Chemical Abstracts Service Number (CAS#)
115. Methoxychlor	72-43-5
116. Methyl bromide (Bromomethane)	74-83-9
117. Methyl chloride (Chloromethane)	74-87-3
118. Methyl chloroform (1,1,1-Trichloroethane)	71-55-6
119. Methylhydrazine	60-34-4
120. Methyl iodide (Iodomethane)	74-88-4
121. Methyl isobutyl ketone (Hexone)	108-10-1
122. Methyl isocyanate	624-83-9
123. Methyl methacrylate	80-62-6
124. Methyl tert-butyl ether	1634-04-4
125. 4,4'-Methylenebis(2-chloroaniline)	101-14-4
126. Methylene chloride (Dichloromethane)	75-09-2
127. 4,4'-Methylenediphenyl diisocynate (MDI)	101-68-8
128. 4,4'-Methylenedianiline	101-77-9
129. Mineral fibers (fine)[3]	--------
130. Naphthalene	91-20-3
131. Nickel Compounds	--------
132. Nitrobenzene	98-95-3
133. 4-Nitrobiphenyl	92-93-3

Chemical Name	Chemical Abstracts Service Number (CAS#)
134. 4-Nitrobiphenol	100-02-7
135. 2-Nitropropane	79-46-9
136. N-Nitroso-N-methyurea	684-93-5
137. N-Nitrosodimethylamine	62-75-9
138. N-Nitrosomorpholine	59-89-2
139. Parathion	56-38-2
140. Pentachloronitrobenzene (Quintobenzene)	82-68-8
141. Pentachlorophenol	87-86-5
142. Phenol	108-95-2
143. p-Phenylenediamine	106-50-3
144. Phosgene	75-44-5
145. Phosphine	7803-51-2
146. Phosphorus	7723-14-0
147. Phthalic anhydride	85-44-9
148. Polychloroinated biphenyls (Aroclors)	1336-36-3
149. Polycyclic Organic Matter[5]	--------
150. 1,3-Propane sultone	1120-71-4
151. beta-Propiolactone	57-57-8
152. Propionaldehyde	123-38-6
153. Propoxur (Baygon)	114-26-1

Chemical Name	Chemical Abstracts Service Number (CAS#)
154. Propylene dichloride (1,2-Dichloropropane)	78-87-5
155. Propylene oxide	75-56-9
156. 1,2-propylenimine (2-Methylaziridine)	75-55-8
157. Quinoline	91-22-5
158. Quinone (p-Benzoquinone)	106-51-4
159. Radionuclides (including radon)[4]	--------
160. Selenium Compounds	--------
161. Styrene	100-42-5
162. Styrene oxide	96-09-3
163. 2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6
164. 1,1,2,2-Tetrachloroethane	79-34-5
165. Tetrachloroethylene (Perchloroethylene)	127-18-4
166. Titanium tetrachloride	7550-45-0
167. Tolune	108-88-3
168. Toluene-2,4-diamine	95-80-7
169. 2,4-Toluene diisocyanate	584-84-9
170. o-Toluidine	95-53-4

Chemical Name	Chemical Abstracts Service Number (CAS#)
171. Toxaphene (chlorinated camphene)	8001-35-2
172. 1,2,4-Trichlorobenzene	120-82-1
173. 1,1,2-Trichloroethane	79-00-5
174. Trichloroethylene	79-01-6
175. 2,4,5-Trichlorophenol	95-95-4
176. 2,4,6-Trichlorophenol	88-06-2
177. Triethylamine	121-44-8
178. Trifluralin	1582-09-8
179. 2,2,4-Trimethylpentane	540-81-4
180. Vinyl acetate	108-05-4
181. Vinyl bromide	593-60-2
182. Vinyl chloride	75-01-4
183. Vinyllidene chloride (1,1-Dichloroethylene)	75-35-4
184. Xylene (mixed isomers)	1330-20-7
185. m-Xylene	108-38-3
186. 0-Xylene	95-47-6
187. p-Xylene	106-42-3

NOTE: For all listings above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

[1] X'CN where X=H' or any other group where a formal dissociation may occur. For example, KCN or $Ca(CN)_2$

[2] $R\text{-}(OCH_2CH_2)\text{-}O^R$

where:

n = 1,2, or 3

R = alkyl C7 or less

or R = phenyl or alkyl substituted phenyl

R' = H, or alkyl C7 or less or: ester; sulfate; phosphate; nitrate; sulonate

[3] Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.

[4] Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocyclic compounds, with two or more fused rings, at least one of which is benzenoid (i.e., containing six carbon atoms and is aromatic) in structure. Polycyclic Organic Matter is a mixture of organic compounds containing one or more of these polycyclic aromatic chemicals. Polycyclic Organic Matter is generally formed or emitted during thermal processes including (1) incomplete combustion, (2) pyrolysis, (3) the volatilization, distillation or processing of fossil fuels or bitumens, or (4) the distillation or thermal processing of non-fossil fuels. The Administrator may delineate, by test method, what is included in polycyclic organic matter.

5 A type of atom which spontaneously undergoes radioactive decay.